

1. Process for the treatment of diseases or disorders of the inner ear linked with damage or destruction of the sensory cells of the inner ear, characterized in that for the regeneration of the sensory cells of the inner ear the inhibiting action of at least one cell cycle inhibitor present in the inner ear is at least partly inhibited or eliminated by an active ingredient.
2. Use of an active ingredient able to inhibit or eliminate the action of a cell cycle inhibitor present in the inner ear, for the treatment of diseases or disorders of the inner ear linked with damage or destruction of the sensory cells of the inner ear.
3. Use of an active ingredient able to inhibit or eliminate the action of a cell cycle inhibitor present in the inner ear, for the preparation of a pharmaceutical composition or a medicament for the treatment of diseases or disorders of the inner ear linked with damage or destruction of the sensory cells of the inner ear.
4. Process or use according to one of the preceding claims, characterized in that the regeneration of the sensory cells of the inner ear takes place by stimulating proliferation of the supporting cells of the inner ear.
5. Process or use according to one of the preceding claims, characterized in that the sensory cells of the inner ear are hair sensory cells.
6. Process or use according to one of the preceding claims, characterized in that the cell cycle inhibitor is a cyclin-dependent kinase inhibitor.
7. Process or use according to claim 6, characterized in that the cyclin-dependent kinase inhibitor is the cyclin-dependent kinase inhibitor p27<sup>Kip1</sup>.
8. Process or use according to one of the preceding claims, characterized in that the disease or disorder of the inner ear is a perceptive deafness.
9. Process or use according to one of the preceding claims, characterized in that the active ingredient is at least one peptide or at least one protein.
10. Process or use according to one of the preceding claims, characterized in that the active ingredient is at least one nucleic acid molecule, particularly recombined nucleic acid molecule.

11. Process or use according to claim 10, characterized in that the nucleic acid molecule codes for a peptide or a protein according to claim 9.

12. Process or use according to claim 10 or 11, characterized in that the nucleic acid molecule is a DNA molecule.

13. Process or use according to claim 12, characterized in that the nucleic acid molecule is a cDNA molecule.

14. Process or use according to claim 10 or 11, characterized in that the nucleic acid molecule is a RNA molecule.

15. Process for the treatment of diseases or disorders of the inner ear linked with damage or destruction of the sensory cells of the inner ear, characterized in that for regenerating the sensory cells of the inner ear the inhibiting action of a cyclin-dependent kinase inhibitor present in the inner ear is at least partly inhibited or eliminated by an active ingredient.

16. Process according to claim 15, characterized in that the cyclin-dependent kinase inhibitor is the cyclin-dependent kinase inhibitor p27<sup>Kip1</sup>.

17. Process according to claim 15 or 16, characterized in that the active ingredient is at least one nucleic acid molecule, particularly recombined nucleic acid molecule.

18. Process according to claim 17, characterized in that the nucleic acid molecule is a RNA molecule.

19. Process according to claim 17 or 18, characterized in that the nucleic acid molecule is an antisense sequence.

20. Process or use according to one of the preceding claims, characterized in that the active ingredient is in the form of a vector and the vector preferably carries a nucleic acid molecule according to one of the claims 10 to 14.

21. Process or use according to claim 20, characterized in that the vector is a viral vector.

22. Process or use according to claim 21, characterized in that the virus is a retrovirus, an adenovirus or an adeno-associated virus.

23. Process or use according to claim 20, characterized in that the vector is a non-viral vector.

24. Process or use according to one of the claims 10 to 14, characterized in that it is a nucleic acid molecule packed in a liposome or a lipoplex.

25. Process or use according to one of the preceding claims, characterized in that the active ingredient is used in a therapeutically active quantity.

26. Process or use according to one of the preceding claims, characterized in that the active ingredient is intended for local application.

27. Pharmaceutical composition or medicament, characterized in that it contains at least one active ingredient able to inhibit or eliminate the action of a cell cycle inhibitor, particularly a cyclin-dependent kinase inhibitor present in the inner ear in an active quantity and a pharmaceutically acceptable carrier.

ADD A1)

add B<sup>4</sup>)